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22852 7590 03/26/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW			EXAMINER	
			CHEN, QING	
	N, DC 20001-4413		ART UNIT PAPER NUMBER	
	·		2191	· <del></del> -
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)	
	10/676,819	WEDEL ET AL.	
Office Action Summary	Examiner	Art Unit	· · · · · · · · · · · · · · · · ·
	Qing Chen	2191	
The MAILING DATE of this communic Period for Reply	cation appears on the cover sheet	with the correspondence address	
A SHORTENED STATUTORY PERIOD FOWHICHEVER IS LONGER, FROM THE MA  - Extensions of time may be available under the provisions or after SIX (6) MONTHS from the mailing date of this commu  - If NO period for reply is specified above, the maximum statt  - Failure to reply within the set or extended period for reply within the set or extended period for reply whan yreply received by the Office later than three months after earned patent term adjustment. See 37 CFR 1.704(b).	ALING DATE OF THIS COMMUN f 37 CFR 1.136(a). In no event, however, may nication. utory period will apply and will expire SIX (6) MO fill, by statute, cause the application to become	IICATION.  a reply be timely filed  DNTHS from the mailing date of this communication  ABANDONED (35 U.S.C. § 133).	.,
Status			
1) Responsive to communication(s) filed	on 30 September 2003		•
	b) This action is non-final.		
3) Since this application is in condition for	<del>'</del>	tters, prosecution as to the merits is	
closed in accordance with the practice			
	•	/	
Disposition of Claims	•		
4) ☑ Claim(s) 1-14 is/are pending in the ap 4a) Of the above claim(s) is/are 5) ☐ Claim(s) is/are allowed. 6) ☑ Claim(s) 1-14 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restrictions.	e withdrawn from consideration.		
Application Papers			
9)⊠ The specification is objected to by the 10)⊠ The drawing(s) filed on 27 February 2 Applicant may not request that any object Replacement drawing sheet(s) including to 11)⊠ The oath or declaration is objected to	$004$ is/are: a) $\square$ accepted or b) $\boxtimes$ ion to the drawing(s) be held in abey the correction is required if the drawin	ance. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.121(d	<b>))</b> .
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for a) All b) Some * c) None of:  1. Certified copies of the priority of the copies of the priority of the certified copies of the copies of the application from the Internation * See the attached detailed Office action	locuments have been received. locuments have been received in f the priority documents have bee al Bureau (PCT Rule 17.2(a)).	Application No n received in this National Stage	
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PT 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date  S. Patent and Trademark Office	O-948) Paper N	y Summary (PTO-413) o(s)/Mail Date f Informal Patent Application 	

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#### **DETAILED ACTION**

1. This is the initial Office action based on the application filed on September 30, 2003.

2. Claims 1-14 are pending.

# Information Disclosure Statement

3. The information disclosure statement filed on March 8, 2004 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

#### Oath/Declaration

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: It does not identify the citizenship of the first inventor.

## Drawings

5. The drawings were received on February 27, 2004. These drawings are not acceptable because the drawings are not in compliance with 37 CFR § 1.121(d). Any changes to an application drawing must be in compliance with 37 CFR § 1.84 and must be submitted on a replacement sheet of drawings, which shall be an attachment to the amendment document and, in the top margin, labeled "Replacement Sheet."

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

• Reference number 200 on page 4, line 27.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

• Reference numbers 510, 520, and 530 of Figure 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application.

The drawings are objected to because:

• Figure 4 is not described in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the Examiner, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### **Specification**

- 6. The disclosure is objected to because of the following informalities:
  - The specification contains the following typographical errors:
    - o The sentence "Restoring the state of the control includes restoring the state of another control that shares data with the control" is repeated twice on page 2, lines 9-10.

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o The specification describes a framework of the system on page 7 as being associated with Figure 4. However, it appears that Figure 4 of the drawings depicts a hierarchical tree, which lacks an appropriate description in the specification. However, Figure 5 of the drawings depicts a framework that is in agreement with the specification. Therefore, "FIG. 4" should presumably read -- FIG. 5 -- and reference numbers "410," "420," and "430" should presumably read -- 510, 520, and 530 -- respectively.

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o "540" should presumably read -- 530 -- on page 7, line 18.

Appropriate correction is required.

7. The use of trademarks, such as JAVASCRIPT, has been noted in this application. Trademarks should be capitalized wherever they appear (capitalize each letter OR accompany each trademark with an appropriate designation symbol, e.g., <sup>TM</sup> or ®) and be accompanied by the generic terminology (use trademarks as adjectives modifying a descriptive noun, *e.g.*, "the JAVA programming language").

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

#### Claim Objections

8. Claims 2-13 are objected to because of the following informalities:

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• Claims 2-8 and 10-13 recite the limitation "the product." Applicant is advised to

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change this limitation to read "the computer program product" for the purpose of

providing it with proper explicit antecedent basis.

• Claim 7 is a duplicate claim of Claim 6.

• Claims 9 and 13 recite the limitation "the application data." Applicant is advised to

change this limitation to read "the stored application data" for the purpose of providing it

with proper explicit antecedent basis.

• Claims 10-12 depend on Claim 9 and, therefore, suffer the same deficiency as Claim

9.

Appropriate correction is required.

#### Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claims 12 and 13 recite the limitation "the application controls." There is insufficient

antecedent basis for this limitation in the claims. In the interest of compact prosecution, the

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Examiner subsequently interprets this limitation as reading "the one or more application controls" for the purpose of further examination.

Claim 13 recites the limitation "the application." There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading "an application" for the purpose of further examination.

### Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-13 recite information carrier as a claimed element. However, it is noted that the specification describes such information carrier as embracing propagated signal (see Page 8: 7-11). Consequently, the information carrier can be reasonably interpreted as carrying electrical signals.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism *per se*, and as such are non-statutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). Moreover, it does not appear that a claim reciting a signal encoded with functional

descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claim 14 contains "means-plus-function" limitations and appears to be an apparatus. However, it is noted that the specification does not disclose any specific corresponding structure or equivalents thereof. The recited means appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules—software *per se*. The claim is directed to an apparatus of functional descriptive material *per se*, and hence non-statutory.

The claims constitute computer programs representing computer listings *per se*. Such descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional interrelationships between the computer program and the rest of the computer, that permits the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

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## Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 3-5, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by <u>Keane</u> et al. (US 5,481,710).

### As per Claim 1, Keane et al. disclose:

- displaying a user interface in a client program, the user interface having a plurality of controls, the plurality of controls including multiple types of controls, each control having a state (see Figures 1 and 2; Column 2: 41-67, "... a computer system display screen is designated generally by the numeral 11. Display screen 11 has displayed therein a window 13, which represents a drawing program, and a window 15, which represents a text editor application.");
- for each control in the plurality of controls, storing the state of the control as a first state for the control (see Column 3: 37-39, "After the applications and undo/redo service have been started and initialized, the application monitors user input at block 41.");
- receiving user input comprising a change to the state of a control in the plurality of controls (see Column 3:39-42, "If, at decision block 43, the user requests a menu, which is illustrated in FIG. 2 by pulling down menu 31, the application executes the menu handler routine, represented generally at block 45.");

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- updating the state of the control based on the user input (see Column 3: 57-59, "If the action is undoable, then the application processes the action, at block 60, builds a packet, at block 61, and gives the packet to the undo/redo service.");

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- storing the updated state of the control as a second state for the control (see Column 4: 6-10, "... after the packet is built, it is given to the undo/redo service where it is "pushed" or put on top of the undo stack of the service at block 63. Whenever a packet is given to the undo/redo service, the redo stack of the service is cleared, at block 65.");
- receiving user input comprising a request to undo the change (see Column 4: 38-40, "... whenever the user requests the UNDO action (at decision block 47 of FIG. 3), the undo/redo service pops the top packet from the undo stack at block 79."); and
- restoring the state of the control to reflect the first state for the control (see Column 4: 41-43, "Then the service executes that packet's undo code block at block 81. Again, the code block, when applied to the object or objects of the packet, will cause the action to be undone.").

As per Claim 3, the rejection of Claim 1 is incorporated; and Keane et al. further disclose:

- wherein the state of the control includes a data state and a view state (see Figures 1 and 2), and wherein the operations further comprise:
- determining whether the change affects the data state or the view state of the control (see Column 4: 13-25, "When the user requests a menu (at decision block 43 of FIG. 3) the application inquires of the undo/redo service, at decision block 67, whether there are any packets to be undone." and "If the undo stack is not empty, then the undo/redo service returns

the text string from the top packet of the undo stack and the application enables the undo action with the string returned from the undo/redo service, at block 71. Thus, in FIG. 2, menu 31 of window 15 includes "UNDO TYPING", which indicates that the text string from the top packet of the undo stack is "TYPING"."); and

- restoring the state of the control only if the change affects the data state of the control (see Column 4: 41-43, "Then the service executes that packet's undo code block at block 81.

Again, the code block, when applied to the object or objects of the packet, will cause the action to be undone.").

As per Claim 4, the rejection of Claim 1 is incorporated; and Keane et al. further disclose:

- receiving user input comprising a request to redo the change to the control (see

  Column 4: 56-57, "... whenever the user requests the REDO action (decision block 51 of FIG. 3)

  ... "); and
- restoring the state of the control to reflect the second state for the control (see Column 4: 57-59, "... the service pops the top packet from the redo stack at block 85 and executes that packets redo code block at block 87.").

As per Claim 5, the rejection of Claim 1 is incorporated; and Keane et al. further disclose:

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- wherein the user input comprising the request to undo the change is received while focus is not on the control (see Column 3: 39-42, "If, at decision block 43, the user requests a

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menu, which is illustrated in FIG. 2 by pulling down menu 31 ...").

Claim 14 is an apparatus claim corresponding to the computer program product claim

above (Claim 1) and, therefore, is rejected for the same reason set forth in the rejection of Claim

1.

15. Claims 9 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by **Baker** 

et al. (US 6,185,591).

As per Claim 9, Baker et al. disclose:

- generating at least one data structure that stores application data, and associations

between the stored application data and one or more application controls that are rendered based

on the stored application data (see Column 7: 52-65, "As part of the data structure 21 of the edit

system, edit control structure 27 represents the global data for controlling the edit system.

Document control structure 28 contains information to control the operations on a document in

the edit system, and as is illustrated pictorially in FIG. 2, there are a plurality of these controls

created, one for each document.");

- detecting that the at least one data structure has changed from a prior state to a new

state (see Column 8: 35-39, "An undo unit records a set (generation) of changes in the

document. It comprises all the data necessary to undo an entire edit operation performed on the

text, from one character change in one text record, to all the changes done in the context of one global change operation.");

- recording the prior state of the at least one data structure (see Column 8: 20-31, "Undo structure 32 within Undo Stack 31 consists of a linked list of undo records created as changes take place to the document during the edit session, while undo recording is enabled.");
- receiving user input requesting that an undo operation be performed (see Column 6: 25-39, "Click the right mouse button while pointing the cursor to the change "c" undo element below document record 010. This brings up a pop-up menu 18 with an item "Restore changed record"."); and
- performing the undo operation by restoring the at least one data structure to the prior state (see Column 6: 25-39, "The user activates this selective record by clicking on it in order to restore the original statement since it was determined that "lineColour" was incorrectly modified to "lineColor" by the previously indicated global change (C) of "Colour" to "Color" ...").

As per Claim 11, the rejection of Claim 9 is incorporated; and Baker et al. further disclose:

- wherein the at least one data structure is stored on a client device (see Column 4: 49-56, "... the invention is also suitable and relevant to various computer system environments ... including use in conjunction with host computer systems such as VM/CMS operating systems and personal computer systems such as OS/2®, AIX® and Windows® operating systems.").

As per Claim 12, the rejection of Claim 9 is incorporated; and <u>Baker et al.</u> further disclose:

- wherein the one or more application controls include multiple types of controls (see Column 7: 40-45, "The Graphical User Interface control 25 controls the document edit view and builds and renders the edit view. Interface control 25 manages the display attributes of the rendered elements. It can show the document Edit Buffer 29 selectively (zoom in/out), by only including in the view those elements whose visibility matches the current settings.").

As per Claim 13, the rejection of Claim 9 is incorporated; and <u>Baker et al.</u> further disclose:

- wherein the associations between the stored application data and the one or more application controls are defined by metadata for an application (see Column 7: 58-60 and 66-67 through Column 8: 1-19, "Edit buffer 29 comprises a linked list of all the elements for a particular document as further described with reference to element structure 30.").

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## Claim Rejections - 35 USC § 103

- 16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 17. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Keane et al.</u> (US 5,481,710).

As per Claim 2, the rejection of Claim 1 is incorporated; and Keane et al. further disclose:

- wherein the multiple types of controls include one or more of a text field control type and a menu control type (see Figures 1 and 2).

However, Keane et al. do not disclose:

- wherein the multiple types of controls include one or more of a radio button control type, a table control type, and a tray control type.

Official Notice is taken that it is old and well known within the computing art to include one or more of a radio button control type, a table control type, and a tray control type in a user interface. A user interface, such as a form, typically includes various form elements that allow a user to input the desired information. For example, a text box is used to input textual information, a group of radio buttons or a pull-down menu is used to make a selection from a list, etc. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include wherein the multiple types of controls include one or more of a radio button control type, a table control type, and a tray control type. The modification would be obvious because one of ordinary skill in the art would be motivated to enhance usability.

18. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Keane et al.</u> (US 5,481,710) in view of <u>Friedman et al.</u> (US 6,167,455).

As per Claim 6, the rejection of Claim 1 is incorporated; however, <u>Keane et al.</u> do not disclose:

- wherein restoring the state of the control includes restoring the state of another control that shares data with the control.

#### Friedman et al. disclose:

- wherein restoring the state of the control includes restoring the state of another control that shares data with the control (see Column 2: 44-47, "The user can thus cause the do and undo method of one command object to be invoked, and the corresponding do or undo method of a linked command object will also be invoked.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of <u>Friedman et al.</u> into the teaching of <u>Keane et al.</u> to include wherein restoring the state of the control includes restoring the state of another control that shares data with the control. The modification would be obvious because one of ordinary skill in the art would be motivated to product consistent results (see <u>Friedman et al.</u> – Column 2: 64-67).

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Claim 7 is rejected for the same reason set forth in the rejection of Claim 6.

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keane et al. (US

5,481,710) in view of Lomet et al. (US 5,524,205).

As per Claim 8, the rejection of Claim 1 is incorporated; however, Keane et al. do not

disclose:

- wherein restoring the state of the control occurs prior to transmitting the state of the

control to a server.

Lomet et al. disclose:

- wherein restoring the state of the control occurs prior to transmitting the state of the

control to a server (see Column 1: 66-67 through Column 2: 1-3, "... a function shipping system,

which is better known as a "partitioned" system, ships a collection of operations to the computer

designated as the "server" for a partition of the data.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of Lomet et al. into the teaching of Keane et al.

to include wherein restoring the state of the control occurs prior to transmitting the state of the

control to a server. The modification would be obvious because one of ordinary skill in the art

would be motivated to perform the operations and ships the results back to the requestor (see

Lomet et al. – Column 2: 2-3).

20. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Baker et al.</u> (US 6,185,591).

As per Claim 10, the rejection of Claim 9 is incorporated; however, <u>Baker et al.</u> do not disclose:

- wherein the at least one data structure is at least one data tree.

Official Notice is taken that it is old and well known within the computing art to utilize tree as a data structure. In computer science, a tree is a widely used data structure that emulates a tree structure with a set of linked nodes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the at least one data structure is at least one data tree. The modification would be obvious because one of ordinary skill in the art would be motivated to make information easier to manipulate and search.

#### Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WEI ZHEN
SUPERVISORY PATENT EXAMINER

hu

QC / **&C** March 6, 2007